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# User's Profile of Thermal Establishments: A Literature Review

Cristina Rodrigues <sup>1</sup>, Fernanda Ferreira <sup>1,4</sup>, Vânia Costa <sup>2,5</sup>, Maria José Alves <sup>3,6</sup>, Márcia Vaz <sup>3,4</sup>, Paula Odete Fernandes <sup>3,4</sup> and Alcina Nunes <sup>3,4</sup>

<sup>1</sup>Instituto Politécnico do Porto, Rua Dr. Roberto Frias, Portugal

<sup>2</sup>Instituto Politécnico do Cávado e do Ave, Campus do IPCA - Lugar do Aldão, Barcelos, Portugal

<sup>3</sup>Instituto Politécnico de Bragança, Campus de Santa Apolónia, Bragança, Portugal

<sup>4</sup>UNIAG-Applied Management Research Unit, Campus de Santa Apolónia, Bragança, Portugal

<sup>5</sup>GOVCOPP-Unidade de Investigação em Governança, Competitividade e Políticas Públicas

<sup>6</sup>CIMO-Centro de Investigação de Montanha, Escola Superior Agrária, Bragança, Portugal

[cilro@sc.ipp.pt](mailto:cilro@sc.ipp.pt)

[faf@esht.ipp.pt](mailto:faf@esht.ipp.pt)

[vcosta@ipca.pt](mailto:vcosta@ipca.pt)

[maria.alves@ipb.pt](mailto:maria.alves@ipb.pt)

[marciafvaz@ipb.pt](mailto:marciafvaz@ipb.pt)

[pof@ipb.pt](mailto:pof@ipb.pt) [alcina@ipb.pt](mailto:alcina@ipb.pt)

**Abstract:** Contemporary society has an increasingly broad and holistic perspective on health and wellness. It is scientifically proven that thermalism perfectly combines these two aspects. It provides a better quality of life and a complete state of well-being, physically and psychologically. Several studies have been carried out over the years, reflecting a paradigm shift in the conception of thermalism establishments. For this reason, the sector's stakeholders need to be prepared and have the necessary knowledge to respond to the different needs, characteristics, and motivations of both usual and new thermal users to define better action strategies. In this context, the research's main objective is to present a literature review and content analysis on the thermalism topic, through the most recognised databases, exploring the offer, identifying its users' profiles and pointing out some trends for the market. As a result of the analyses, the growing interest and relevance of thermalism in scientific production stand out, particularly in tourism, as a social science. There are several studies that present a direct link between thermalism and tourism activity. It is notorious that thermal activity has both a recreational and medicinal dimension, all over the world. Literature analysis has also revealed the power of thermal waters for the treatment of a wide range of diseases and health issues, related to different medical specialities. Although the more traditional thermalism is still very present, the most recent studies portray some gradual changes on the demand and supply side, with a constant adjustment of both. Particularly in the user profile, there is evidence of a rejuvenated, healthier and heterogeneous demand, with different motivations to frequent the thermal spas. On the supply side, it can be seen that these establishments are seeking to reinvent themselves in order to complement their basic offer related to medical dimension, also focusing on the leisure, to enrich the experience of their regular users and attract others. Regarding the expected trends, they are mainly related to 1) Increased demand for prevention, leisure and well-being dimension; 2) Changes in the user profile; and 3) High potential for tourism activity.

**Keywords:** thermalism, health and wellness, users' profile, literature review, trends

## 1. Introduction

Entities such as the World Health Organisation (WHO), many leisure and healthcare practitioners and also academics are aware of the intersections between leisure, health and well-being (Young et al., 2021). Several sectors, activities, and particular elements are connected to health and well-being, such as the water. Moss (2010) states that water has been used to promote health in the past and nowadays. According to Taofeek et al. (2020, p. 99) the "use of thermal mineral water is a very rich historical therapeutic remedy having developed into a popular therapy in many countries of the world". In this context, the thermalism market has received more attention and credibility in recent years. Maseda et al. (2018) consider that thermalism arises from a primary natural resource, the water, specifically the mineral-medicinal thermal water and its commercial exploitation, related to health, wellness, leisure and tourism. According to Gonçalves and Costa Guerra (2019), thermalism is associated with trips whose motivation is the experience of treatments and therapies based on mineral-medicinal waters and other complementary means to prevent, rehabilitate and promote health. Rama et al. (2018) identify three similar services that use water as the main resource for their treatments: thermalism, thalassotherapy and spa. The difference between them is the type of water that they use. Thermalism uses

mineral-medicinal water, thalassotherapy uses seawater and spas normal water. To be medicinal waters, they must necessarily have a medically proven healing effect (Strack and Raffay-Danyi, 2020).

Although the literature on the profile of thermal users is limited, some studies are beginning to emerge. Brandão et al. (2021) and León (2017) understand, there is very little knowledge about these consumers, namely thermal tourists. For this reason, this type of article with a literature approach is very important since it contributes to the knowledge of thermalism, specifically about its supply and its users. This paper is organised in the following topics: first, the introduction provides a framework for the whole paper. Secondly the presentation of the methodological options. Then a literature review and content analysis, exploring different aspects: the different types of thermal establishments, the users' motivations for wellness services, the users' sociodemographic profile of thermal spas, the health dimension of thermal establishments and finally some emerging trends for thermalism. At last, a conclusion of the analyses is presented.

## 2. Research design and methods

This study uses literature review and content analysis as research methodology. These types of studies provide a comprehensive overview of the literature related to a topic/theory and analyse previous studies, consolidating existing knowledge under new approaches (Synder 2019; Paul and Criado 2020). The literature selection followed a logic of Narrative Review, in which the most important thing is the gathering of relevant information that provides context and substance to the overall purpose of the study (Xiao and Watson, 2019). The main objective is to analyse the most recent literature on thermalism, exploring relevant associated themes that will allow an effective understanding of the current state of thermalism and the direction it will take in the coming years. The analysis was conducted using the most reliable databases, primarily the Web of Science and Scopus (Pranckutė, 2021), also ScienceDirect and PubMed. The selection of articles and other scientific papers was based on the identification of their keywords and the reading of their abstracts, analysing the most relevant ones for the purpose of the study. Fifty scientific papers were analysed, most of them in English and carried out in the last five years and few slightly older ones. Three key themes were identified: Health and wellness; Thermalism; and User's profile of thermal spas. Papers that linked these themes simultaneously were privileged. Other articles that were unrelated to any of these three themes were excluded and articles before 2008.

## 3. Thermal establishments

A thermal establishment is a health care unit in which the therapeutic properties of natural mineral water are used for the prevention of illnesses, therapy, rehabilitation and maintenance of health, with the possibility of practising complementary and adjunctive techniques, as well as thermal wellness services (Associação das Termas de Portugal, 2021). The Global Wellness Institute (GWI) considers many categories and types of thermal establishments, including hot spring swimming pools and waterparks; thermal/mineral water bathing facilities, spas and resorts; and health resorts/sanatoria that used thermal/mineral waters for treatments. The Thermal/mineral springs sector are "revenue-earning business establishments associated with the wellness, recreational and therapeutic uses of waters with special properties" (Global Wellness Institute, 2021a). As can be observed in Table 1, GWI counts thermal/mineral springs establishments that operate as a business and do not include springs that do not have any built facilities and/or do not charge any fee or establishments that do not have naturally sourced thermal/mineral water.

**Table 1:** Types of thermal establishments

| Types of Thermal/Mineral Springs Establishments         |  |   |
|---|--|---|
| Primarily recreational                                  | Primarily wellness                       | Primarily therapeutic or curative   |
| Thermal/mineral water swimming pool facilities          | Thermal/mineral water bathing facilities | Health resorts and sanatoria that use thermal/mineral waters for treatments |
| Thermal/mineral water-based waterparks                  | Thermal/mineral water-based spas         |   |
| Hotel/resorts with thermal/mineral water swimming pools | Thalassotherapy spas and resorts         |   |
| Thermal or hot spring resorts                           |  |   |

Source: Global Wellness Institute (2021a)

Thus, there are essentially three types of thermal establishments, which differ according to their purpose or function: Recreational, Wellness, Therapeutic or Curative. Thermal establishments have been increasingly successful, mainly due to the growing importance and concern with the state of health and well-being in recent

decades. Society, in general, is more aware of health and wellness issues, both physical and psychological, also due to the recommendations of the WHO (Pereira et al., 2017).

#### **4. The wellness segment: Motivations of consumers**

According to Edlin and Golanty (2015) the wellness model of health emphasises self-healing, health promotion and the prevention of illness, rather than solely the treatment of disease symptoms. Wellness is not a passive or static state but rather an active pursuit that is associated with intentions, choices and actions towards an optimal state of health and well-being. It is linked to holistic health that extends beyond physical health and incorporates many different dimensions that should work in harmony (Global Wellness Institute, 2021b). As the wellness dimension is also related to leisure, many consumers of wellness services and products are tourists, so the motivations of wellness tourists have received more attention.

Numerous factors can influence wellness consumer purchasing behaviour, namely push factors, in other words - motivations, as argued by Dryglas and Różycki (2017) which also indicates that behavioural characteristics have the most impact when it comes to matching products to the needs of a particular group concerning marketing. According to Dimitrovski and Todorović (2015), the wellness market is divided into two groups based on their motivations: socially active and self-focused tourists. Their main motivations are socialisation, excitement and relaxation. The Wellness Tourist Motivation Scale (WTMS), presented by Kessler et al. (2020), is composed of seven dimensions: 1) Movement and Fitness; 2) Healthy Food and Diet; 3) Meditation and Mindfulness; 4) Rest and Relaxation; 5) Learning about Wellness; 6) Self-care; 7) Nature and Disconnect.

Based on motivations for booking in a wellness hotel, Kim and Yang (2021) identify two distinct groups: the "seeking healing" and the "explorers of local history". The ones seeking specific treatments, in a more health dimension, and those seeking the territory's culture, in an escape and leisure dimension. Kessler et al. (2020) analyse the motivations for wellness tourism by generation groups. The Baby boomers' motivations relate mainly "to look and feel better" and "to experience activities outdoors". In contrast, Generation X relate mainly "to escape the demands of everyday life" and "to experience activities outdoors". For Millennials, the highest-scoring motivations include "to escape the demands of everyday life", "to return to everyday life feeling rejuvenated", and "to feel grounded in nature." Several studies are exploring the profile of the wellness practitioner, looking at different dimensions across generational groups. Aleksijevit (2019) found two markets - people aged 35-54 (Generation X) and 55-74 (Baby Boomers) and the results indicate that most have a high level of education, with higher average incomes and preferences for travelling with friends or family.

Regarding the motivations for selecting a wellness destination, Aleksijevits (2019) concludes that wellness consumers/tourists, for example, purchase their wellness trips through travel agencies. The author also found that these tourists do complete research about the destination's valences and visit various review sites such as "Trip Advisor" before booking. This study still reveals that wellness tourists assign importance to these online recommendations more than a recommendation from word of mouth. According to Strack and Raffay-Danyi (2020), the four most important factors for users choosing spas in the Hungarian market are price, cleanliness of the facilities, types of pools, and the recommendation of family and friends. Several aspects can be studied concerning wellness consumers, not only their motivations but also their purchasing behaviours and the reasons behind their decisions to acquire wellness services.

#### **5. The thermalism: Characteristics and demographic variables of users'**

Brandão et al. (2021) concluded that the sociodemographic profile influences not only the motivations of thermal tourists but also the choice of services made available, the determination of operations, the creation of new spa services, marketing and its strategy. Also, according to Liberato et al. (2021), there is a relationship between the services provided and the sociodemographic profile of thermal spa visitors in Portugal's North and Centre regions. It is important to note that there are many types of thermal establishments. Some authors refer to thermal establishments as spas and thermal spas.

According to Strack and Raffay-Danyi (2020) findings, in Hungary, the most frequent profile in spa establishments are families, the elderly, and couples without dependent children. The young people were identified as the least common segment. The most significant group is the users enjoying social insurance financed healing services and a considerable number of users take spa services due to their doctor's recommendation. Similarly, Esiyok et al. (2018) mention that seniors are more likely to participate in thermal tourism than other age groups, such as

the middle age group. Dryglas and Różycki (2017) report that beneficiaries of health insurance or social security plans are mostly older with chronic diseases, while, people who have no support and pay from their private resources are mostly younger and healthier. Regarding the length of stay in a spa establishment, Pinos Navarrete et al. (2020) discovered three groups of consumers: thermalists supported by the *IMSERO* with an extended stay (10 and 12 days), individual thermalists (more than 4 days) and the group of thermal tourists (lower than 5 days). This research also concluded that the largest number of users belongs to the Social Thermalism group, through the Social Thermalism Programme (*IMSERO*) and the group of thermal tourists is the group that has experienced the most notable increase (13%). Regarding age and gender, the average age of users in the *IMSERO* programme is 72 years, indicating that these users are older people. The so-called private users, those who do not receive any type of subsidy, also account for a significant amount of the population over 65 years. The group of thermal tourists usually comes in pairs, groups of friends and families.

The Anaya-Aguilar et al. (2021) also analyse the profile of spa tourists, particularly in Andalusia, southern Spain. The methodology used was a quantitative study based on a stratified cross-sectional survey. Findings indicate that the average age is 56 years  $\pm$  0.8. Female users are a clear majority (61.8%). In terms of occupation, two large groups stand out among the tourists: retirees (53.1%  $\pm$  2.1) and employed [34%  $\pm$  2.0]. Regarding monthly income, the sample includes three main income brackets. These are, first, those who have an average monthly income of less than 500 euros (29.8%  $\pm$  2.0); second, those who earn an average of 501 and 1,000 euros per month (33.1%  $\pm$  2.0); and, third, those who have a monthly average income of between 1,001 and 1,500 euros (26.6%  $\pm$  1.9). Thus, a high percentage of the study population fall inside the low-income brackets.

Brandão et al. (2021) developed a research on the North and Centre of Portugal, applying a questionnaire survey to thermal tourists, through a non-probability sampling by convenience technique and the results indicate that in terms of gender, the sample is mainly composed of women (nearly 60%). With regard to age, there was a prominent proportion of people between 55 and 64 years and 65 and 74 years. For academic qualifications, 25% have a higher education degree. Almost half of the respondents are retired and as for their monthly income, one third earns between 1,000 and 2,000 euros. Liberato et al. (2021) research was based on a sample of 201 participants in the same region of Portugal, but in a pandemic context (COVID-19) and the results show that most of the respondents are female, and the percentage of respondents aged 45-54 years or over is increasing. In terms of academic qualifications, basic education, high school, and university degrees are dominant. In terms of employment situation, it is possible to ascertain that around 50% of the respondents are retired/pensioners, and almost 40% are full-time workers. Regarding the net monthly income, 49.8% of the respondents earn up to €1,000, and 33.8% between €1,001 and €2,000.

Silvério et al. (2021), also in Portugal, through the face-to-face and random application of questionnaires, obtained a sample of 107 people, which allowed them to draw a sociodemographic profile of thermal spa users, in Chaves. Concerning the profile of thermalists who visited Chaves thermal spa, almost 70% of the sample were women and 30% men. The average age resulted in 58 years. Regarding the level of education, 44% had a higher education degree. Regarding employment, most of the respondents were inactive, mainly retired individuals. Concerning nationality, the majority were Portuguese (about 80%), of these 72% came from the Northern region of Portugal, where the Chaves thermal spa is located. This is in line with one Pinos Navarrete et al. (2020) conclusions, who indicated that thermal spa visitors make trips considered short from their usual place of residence to the thermal spas.

## **6. Thermal establishments: Evidence of their treatments**

There is evidence from the literature that validates the real effects of thermalism on different pathologies and health/well-being issues (Martins et al., 2021). According to Pereira et al. (2021), the therapeutic effects of thermal water cover several pathologies and disorders, namely respiratory, digestive, dermatological and musculoskeletal. Taofeek et al. (2020) also indicate multiple sclerosis, type 2 diabetes, dermatitis, fibromyalgia, chronic low back pain, cardiovascular disease, chronic venous insufficiency and stress. As stated in Taofeek et al. (2020), one approach often recommended for some of these disorders are the complementary/integrative therapies as the use of thermal mineral water from hot springs known as balneotherapy/spa therapy, one practice that is common in Turkey, Hungary, Romania, Germany, Portugal, Japan, Poland, Spain, Italy, and France. As refer Cacciapuoti et al. (2020), thermal water' therapeutic effects result from the combination of chemical, physical, immunological, and microbiological properties. Masiero et al. (2020) also give the idea that

many spas (thermal spas) are real multi-specialist structures with a potential rehabilitation value, with an adequate rehabilitation staff and rehabilitative and assistive technologies.

As Pinos Navarrete et al. (2020) refer, the traditional spa (thermal spa) in Europe are still heavily dependent on traditional "thermalists", with an ageing profile and interest in medical treatments for their illnesses. Because, as indicated by Robson and Troutman-Jordan (2015), older adults are particularly vulnerable to disease and health decline. For that reason, they are the most common group in thermal establishments (Esiyok et al., 2018). In relation to older people, Karagülle (2008) refer that these therapies (hydro, balneo and thalasso) can be considered from three different aspects: firstly, the antiaging effects, the preventive effects on the biological and physiologic processes that develop in the elderly or therapeutic effects on the pathological consequences. Secondly, the prevention, treatment and rehabilitation of the diseases that frequently occur in the elderly. Thirdly, they complement and support other treatment modalities for this population segment. These are the main therapies that use water: Balneotherapy; Thalassotherapy and Hydrotherapy (Karagülle, 2008; Moss, 2010; Corvillo et al., 2020). Moss (2010) refer that in hydrotherapy, as in balneotherapy and thalassotherapy, there are three ways of taking the waters: externally (through immersion, either total or partial), internally (through drinking), and into the lungs and respiratory tract (through the inhalation of aerosols).

Balneotherapy treatment employs bathing in thermal or mineral waters, gases or peloids; drinking water or inhaling gases or water. Thalassotherapy uses seawater, sea products and shore climate as a form of therapy believed to have beneficial effects on the skin. Hydrotherapy treatment immerses a part of or the whole body in plain water, often employing exercises or applying water jets (Rawlinson and Heap, 2017). According to Matsumoto (2018), balneotherapy is mainly used to prevent, treat, and rehabilitate musculoskeletal diseases. It is even used in the rehabilitation of psychiatric patients. As Cacciapuoti et al. (2020) indicate, dermatologic or skin diseases are frequently treated by balneotherapy, with a high success rate for psoriasis and atopic dermatitis. Beyond these, thermal medicine can treat: Acne; Contact dermatitis; Seborrheic dermatitis and Collagen vascular disorders (Gianfaldoni et al., 2017). Some of the many scientific proofs of thermal water in terms of diseases or disorders and their treatment or therapies are presented in Table 2.

**Table 2:** Some diseases/disorders and their treatment/therapies with thermal water

| Diseases and Disorders            | Treatments/Therapies                              | Reference                |
|-----------------------------------|---|--------------------------|
| Respiratory                       | Inhalations with thermal waters                   | Zajac, 2021              |
| Heavy smokers                     | Sulphurous thermal water inhalation               | Carubbi et al., 2019     |
| Cardiovascular and chronic venous | Physical fitness in a thermal aquatic environment | Menegatti et al., 2021   |
| Chronic low back pain             | Balneotherapy                                     | Gáti et al., 2018        |
| Osteoarthritis                    | Thermal mineral waters                            | Hanzel et al., 2018      |
| Rheumatoid arthritis              | Balneotherapy                                     | Verhagen et al., 2015    |
| Allergic rhinitis                 | Intranasal administration of thermal water        | Ciprandi et al., 2016    |
| Benign prostatic hyperplasia      | Water vapour thermal therapy                      | Miller et al., 2020      |
| Dermatology (psoriasis)           | Balneotherapy                                     | Khalilzadeh et al., 2019 |

Source: Authors' elaboration

## 7. The future of thermalism: some emerging trends

Today thermal establishments are re-emerging with new offerings that complement the classic thermalism. The thermal establishments are going through a new phase of evolution, from classic thermalism, focused on health, to a growing integration of wellness. For example, in the particular case of Portugal, in 2011, wellness represented 43% of the total enrolments in spa establishments and in 2014, it became about 61% (Gonçalves and Costa Guerra, 2019). As the consideration of wellness has evolved through the adoption of practices linked to self-care, nutrition, meditation and other related aspects, wellness can now be seen as a necessity for a complete state of health and a better quality of life, rather than as a luxury (Thorne, 2021). Tourism is a sector that has high strength in the area of health and wellness. Smith and Puczkó (2015, p. 217) show that "tourism is playing an increasingly important role in spas and wellness facilities with 43% of all customers being tourists, either domestic or international". Thorne (2021) refer that this happens because consumers are becoming more aware of their health and well-being, encouraging them to travel to meet their personal wellness requirements. For Strack and Raffay-Danyi (2020), another reason could be population ageing. Sousa and Barros (2021) refer to the changes in thermal tourism and the subsequent diversification of its offer that have impacted the profile

of thermal users. Therefore, in the last decades, thermalism has been reinventing itself and conquering more users and attracting new market segments and has impacted contemporary society in several aspects. For example, as stated by Araujo et al. (2015), beyond its economic impact, thermal spa tourism affects the well-being of the local populations through other types of infrastructures and services, including but not limited to the preservation of heritage, job creation and territorial anchoring of populations, as well as the overarching effects of the region's image in the community. Some of the many trends that are prospective for the future of the thermalism sector and its market have already emerged in the literature. Some of these trends are summarised in Table 3.

**Table 3:** Some evidence from the literature for the future of thermalism

| Predicted trends  | Evidence in literature   | References                       |
|---|--|----------------------------------|
| Increased demand for prevention, leisure and well-being dimension                 | In the future, an important challenge will be to adopt strategies to the changing profile of typical spa customers, who are nowadays more oriented towards medical prevention than towards healing.          | Dimitrovski and Todorović, 2015  |
|   | Spas still attract people for health and rejuvenation purposes and increasingly for wellness purposes (a combination of health improvement, self-pampering, and self-development).                           | Koskinen and Wilska, 2019        |
|   | There is a clear aim to empower thermal establishments to develop a diversified offer that effectively enhances health, wellness, and tourism.   | Gonçalves and Costa Guerra, 2019 |
| Changes in the user profile, younger, healthier and heterogeneous                 | The 374 Millennial (generation of 1980 to 2000) respondents had positive experiences and affirmed that they enjoy noteworthy feelings of wellness after visiting a thermal bath.                             | Tang et al., 2020                |
|   | The profile of thermal baths has not changed markedly, although it is evolving. The demand is gradually rejuvenated, following other European spas. The number of traditional thermalists is stagnant.       | Pinos Navarrete et al., 2020     |
|   | Individuals benefiting from public health or social insurance are mostly older and chronically ill, whereas people who pay for their stay at a spa resort with private funds are mostly younger and healthy. | Dryglas and Różycki, 2017        |
| High potential for tourism activity: thermal tourism, health and wellness tourism | Thermal tourism has an uppermost position in terms of the continuous growth rates regarding the number of tourists and the economic benefits.  | Brandão et al., 2021             |
|   | Health tourism, namely thermalism, is currently an emerging and recognised touristic product due to the association of leisure, wellness and global health rehabilitation.                                   | Pereira et al., 2017             |
|   | Thermal tourism has become an emerging market segment, also for those seeking disease prevention, physical improvement, spiritual balance or cultural and relaxation programs.                               | Sousa and Barros, 2021           |

Source: Authors' elaboration

## 8. Conclusion

This article has highlighted some important aspects that identify thermalism as a central service in the larger field of health and well-being. The analyses made it possible to identify some important aspects of thermal users and understand thermalism as a product of health, well-being, and even tourism. It is notorious that thermal activity has both a recreational and medicinal dimension, all over the world. It is also evident that the thermal waters with unique properties help treat different types of disorders, being also very important for the prevention of certain diseases related to different medical specialities. The characteristics of thermal users reveal some gradual changes over the last few years, but the more traditional demand is still very present. The sociodemographic profile of these users indicates that women stand out in terms of gender, so there are generally more women than men. In terms of age, it is also evident that the majority of users are between 50 and 75 years old, mostly retired, pensioners and elderly people. The vast majority of studies report that young people are less common. In terms of income, the results are less uniform; however, several studies indicate that these users are financially capable people with above average incomes. Many users access thermal spas by medical recommendation. The same goes for educational level, there are different results, but it is noted that a large proportion of users have an academic degree. This may mean that thermal spas appeal mainly to more instructed consumers. There are other interesting data, namely the fact that most users live near or in the region where the thermal establishments are located. Thermalism, as a high growth sector, increasingly explored even

as a complement to other services, has revealed important trends for its market. In this study it was possible to identify three of them: the increase in prevention, leisure and well-being as complementary dimensions of health; the changes in the profile of the user, younger, healthier and heterogeneous; and the high potential for tourism activity for different types of tourism.

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